

SEQUENCE LISTING

<110> Zaiou, Mohamed
Gallo, Richard L.

<120> THERAPY FOR MICROBIAL INFECTIONS

<130> 15670-076001

<150> US 60/459,924

<151> 2003-04-02

<160> 16

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 513

<212> DNA

<213> Homo sapiens

<400> 1

atgaagaccc	aaagggatgg	ccactccctg	gggcgggtgg	cactgggtgct	cctgctgctg	60
ggcctgggtga	tgcctctggc	catcattgcc	caggtcctca	gctacaagga	agctgtgctt	120
cgtgctatag	atggcatcaa	ccagcgggcc	tcggatgcta	acctctaccg	cctcctggac	180
ctggacccca	ggcccacgat	ggatggggac	ccagacacgc	caaagcctgt	gagcttcaca	240
gtgaaggaga	cagtgtgccc	caggacgaca	cagcagtcac	cagaggattg	tgacttcaag	300
aaggacgggc	tggtgaagcg	gtgtatgggg	acagtgaccc	tcaaccaggc	caggggctcc	360
tttgacatca	gttgtgataa	ggataacaag	agatttgccc	tgctgggtga	tttcttcg	420
aaatctaaag	agaagattgg	caaagagttt	aaaagaattg	tccagagaat	caaggatttt	480
ttgcggaatc	ttgtaccag	gacagagtcc	tag			513

<210> 2

<211> 170

<212> PRT

<213> Homo sapiens

<400> 2

Met	Lys	Thr	Gln	Arg	Asp	Gly	His	Ser	Leu	Gly	Arg	Trp	Ser	Leu	Val
1			5						10					15	
Leu	Leu	Leu	Leu	Gly	Leu	Val	Met	Pro	Leu	Ala	Ile	Ile	Ala	Gln	Val
			20					25					30		
Leu	Ser	Tyr	Lys	Glu	Ala	Val	Leu	Arg	Ala	Ile	Asp	Gly	Ile	Asn	Gln
		35					40					45			
Arg	Ser	Ser	Asp	Ala	Asn	Leu	Tyr	Arg	Leu	Leu	Asp	Leu	Asp	Pro	Arg
		50				55					60				
Pro	Thr	Met	Asp	Gly	Asp	Pro	Asp	Thr	Pro	Lys	Pro	Val	Ser	Phe	Thr
65					70					75					80
Val	Lys	Glu	Thr	Val	Cys	Pro	Arg	Thr	Thr	Gln	Gln	Ser	Pro	Glu	Asp
				85					90					95	
Cys	Asp	Phe	Lys	Lys	Asp	Gly	Leu	Val	Lys	Arg	Cys	Met	Gly	Thr	Val
			100					105					110		
Thr	Leu	Asn	Gln	Ala	Arg	Gly	Ser	Phe	Asp	Ile	Ser	Cys	Asp	Lys	Asp
		115					120					125			
Asn	Lys	Arg	Phe	Ala	Leu	Leu	Gly	Asp	Phe	Phe	Arg	Lys	Ser	Lys	Glu
	130						135				140				

Lys	Ile	Gly	Lys	Glu	Phe	Lys	Arg	Ile	Val	Gln	Arg	Ile	Lys	Asp	Phe
145					150					155					160
Leu	Arg	Asn	Leu	Val	Pro	Arg	Thr	Glu	Ser						
			165					170							

<210> 3
 <211> 103
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> cationic cathelin-like peptide

<221> VARIANT
 <222> 1
 <223> Xaa = Gln or Arg

<221> VARIANT
 <222> 2
 <223> Xaa = Ala, Val or Thr

<221> VARIANT
 <222> 3
 <223> Xaa = Leu or Pro

<221> VARIANT
 <222> 6
 <223> Xaa = Lys or Arg

<221> VARIANT
 <222> 7
 <223> Xaa = Glu or Asp

<221> VARIANT
 <222> 13
 <223> Xaa = Val or Ile

<221> VARIANT
 <222> 14
 <223> Xaa = Asn, Asp or Gly

<221> VARIANT
 <222> 15
 <223> Xaa = Gly, Arg, Asp or Gln

<221> VARIANT
 <222> 16
 <223> Xaa = Leu, Ile or Phe

<221> VARIANT
 <222> 18
 <223> Xaa = Glu or Gln

<221> VARIANT
 <222> 19
 <223> Xaa = Gln or Arg

<221> VARIANT
<222> 21
<223> Xaa = Ser or Leu

<221> VARIANT
<222> 22
<223> Xaa = Asp or Glu

<221> VARIANT
<222> 23
<223> Xaa = Glu, Ala or Thr

<221> VARIANT
<222> 30
<223> Xaa = Gln, Glu or Asp

<221> VARIANT
<222> 32
<223> Xaa = Asp or Asn

<221> VARIANT
<222> 33
<223> Xaa = Ser, Gln or Pro

<221> VARIANT
<222> 34
<223> Xaa = Gln, Pro, Arg, Glu or Ala

<221> VARIANT
<222> 36
<223> Xaa = Lys, Thr, Gln or Asn

<221> VARIANT
<222> 37
<223> Xaa = Gly, Ala, Met or Asp

<221> VARIANT
<222> 38
<223> Xaa = Asp or Glu

<221> VARIANT
<222> 39
<223> Xaa = Gly, Glu or Val

<221> VARIANT
<222> 42
<223> Xaa = Asn, Gly or Asp

<221> VARIANT
<222> 43
<223> Xaa = Thr or Ile

<221> VARIANT
<222> 44
<223> Xaa = Pro or Arg

<221> VARIANT

<222> 46
<223> Xaa = Pro or Ser

<221> VARIANT
<222> 48
<223> Xaa = Ser or Arg

<221> VARIANT
<222> 50
<223> Xaa = Thr or Arg

<221> VARIANT
<222> 57
<223> Xaa = Pro or Gly

<221> VARIANT
<222> 58
<223> Xaa = Lys or Arg

<221> VARIANT
<222> 59
<223> Xaa = Pro, Thr or Ala

<221> VARIANT
<222> 60
<223> Xaa = Thr or Glu

<221> VARIANT
<222> 61
<223> Xaa = Gln or Arg

<221> VARIANT
<222> 63
<223> Xaa = Pro, Ser or Leu

<221> VARIANT
<222> 64
<223> Xaa = Pro or Leu

<221> VARIANT
<222> 66
<223> Xaa = Gln, Leu, Asp or Glu

<221> VARIANT
<222> 68
<223> Xaa = Gly, Asp or Ala

<221> VARIANT
<222> 71
<223> Xaa = Asp, Glu or Lys

<221> VARIANT
<222> 72
<223> Xaa = Asn, Asp or Gln

<221> VARIANT
<222> 74

<223> Xaa = Leu or Arg

<221> VARIANT

<222> 77

<223> Xaa = Gln or Arg

<221> VARIANT

<222> 79

<223> Xaa = Glu, Val or Met

<221> VARIANT

<222> 81

<223> Xaa = Ala or Thr

<221> VARIANT

<222> 83

<223> Xaa = Thr or Ile

<221> VARIANT

<222> 85

<223> Xaa = Asp or Asn

<221> VARIANT

<222> 86

<223> Xaa = Glu, Pro or Gln

<221> VARIANT

<222> 87

<223> Xaa = Asp, Ser or Ala

<221> VARIANT

<222> 88

<223> Xaa = Thr, Ile, Arg, Ala or Asn

<221> VARIANT

<222> 89

<223> Xaa = Gly, His or Asp

<221> VARIANT

<222> 90

<223> Xaa = Ser, Tyr or Gln

<221> VARIANT

<222> 91

<223> Xaa = Phe or Leu

<221> VARIANT

<222> 93

<223> Xaa = Ile or Leu

<221> VARIANT

<222> 94

<223> Xaa = Asn or Ser

<221> VARIANT

<222> 96

<223> Xaa = Asn or Asp

<221> VARIANT
 <222> 97
 <223> Xaa = Ser, Glu or Lys

<221> VARIANT
 <222> 98
 <223> Xaa = Ile, Asp, Ala or Leu

<221> VARIANT
 <222> 99
 <223> Xaa = Leu, Gln or Asn

<221> VARIANT
 <222> 100
 <223> Xaa = Ser, Pro, Lys or Gln

<221> VARIANT
 <222> 101
 <223> Xaa = Val, Phe or Arg

<221> VARIANT
 <222> 102
 <223> Xaa = Arg, Phe or Lys

<221> VARIANT
 <222> 103
 <223> Xaa = Phe, Ala, Arg or Lys

<400> 3
 Xaa Xaa Xaa Ser Tyr Xaa Xaa Ala Val Leu Arg Ala Xaa Xaa Xaa Xaa
 1 5 10 15
 Asn Xaa Xaa Ser Xaa Xaa Xaa Asn Leu Tyr Arg Leu Leu Xaa Leu Xaa
 20 25 30
 Xaa Xaa Pro Xaa Xaa Xaa Xaa Asp Pro Xaa Xaa Xaa Lys Xaa Val Xaa
 35 40 45
 Phe Xaa Val Lys Glu Thr Val Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa Xaa
 50 55 60
 Glu Xaa Cys Xaa Phe Lys Xaa Xaa Gly Xaa Val Lys Xaa Cys Xaa Gly
 65 70 75 80
 Xaa Val Xaa Leu Xaa Xaa Xaa Xaa Xaa Xaa Asp Xaa Xaa Cys Xaa
 85 90 95
 Xaa Xaa Xaa Xaa Xaa Xaa
 100

<210> 4
 <211> 5
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> spacer peptide

<400> 4
 Gly Gly Gly Gly Ser
 1 5

<210> 5
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> linker moiety

<400> 5
 Gly Gly Gly Gly Gly Gly Ser Met Phe Gly Gly Ala Lys Lys Arg Ser
 1 5 10 15
 Gly Gly Gly Gly Gly Gly
 20

<210> 6
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 6
 tccgagctcg acgatgacga taagctgctg ggtgatttct tccgg 45

<210> 7
 <211> 39
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 7
 ccgctcgagc taggactctg tcctgggtac aagattccg 39

<210> 8
 <211> 36
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 8
 ccgctcgagc tactaggcaa atctcttggt atcctt 36

<210> 9
 <211> 5
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> recognition sequence

<400> 9
 Asp Asp Asp Asp Lys

1 5
 <210> 10
 <211> 5
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> consensus sequence

<221> VARIANT
 <222> 2, 4
 <223> Xaa = Any Amino Acid

<400> 10
 Gln Xaa Val Xaa Gly
 1 5

<210> 11
 <211> 172
 <212> PRT
 <213> Canis familiaris

<400> 11
 Met Glu Thr Gln Lys Asp Ser Pro Ser Leu Gly Arg Trp Ser Leu Leu
 1 5 10 15
 Leu Leu Leu Leu Gly Leu Val Ile Thr Pro Ala Ala Ser Arg Ala Leu
 20 25 30
 Ser Tyr Arg Glu Ala Val Leu Arg Ala Val Asn Gly Phe Asn Gln Arg
 35 40 45
 Ser Ser Glu Glu Asn Leu Tyr Arg Leu Leu Gln Leu Asn Ser Gln Pro
 50 55 60
 Lys Gly Asp Glu Asp Pro Asn Ile Pro Lys Pro Val Ser Phe Thr Val
 65 70 75 80
 Lys Glu Thr Val Cys Pro Lys Thr Thr Gln Gln Pro Leu Glu Gln Cys
 85 90 95
 Gly Phe Lys Asp Asn Gly Leu Val Lys Gln Cys Glu Gly Thr Val Ile
 100 105 110
 Leu Asp Glu Asp Thr Gly Tyr Phe Asp Leu Asn Cys Asp Ser Ile Leu
 115 120 125
 Gln Val Lys Lys Ile Asp Arg Leu Lys Glu Leu Ile Thr Thr Gly Ala
 130 135 140
 Gln Lys Ile Gly Lys Lys Ile Arg Arg Ile Gly Gln Arg Ile Lys Asp
 145 150 155 160
 Phe Leu Lys Asn Leu Gln Pro Arg Glu Glu Lys Ser
 165 170

<210> 12
 <211> 172
 <212> PRT
 <213> Sus scrofa

<400> 12
 Met Glu Thr Gln Arg Ala Ser Leu Cys Leu Gly Arg Trp Ser Leu Trp
 1 5 10 15
 Leu Leu Leu Leu Ala Leu Val Val Pro Ser Ala Ser Ala Gln Ala Leu
 20 25 30


```

Ser Tyr Arg Glu Ala Val Leu Arg Ala Val Asp Arg Leu Asn Glu Gln
   35                               40                               45
Ser Ser Glu Ala Asn Leu Tyr Arg Leu Leu Glu Leu Asp Gln Pro Pro
   50                               55                               60
Lys Ala Asp Glu Asp Pro Gly Thr Pro Lys Pro Val Ser Phe Thr Val
  65                               70                               75                               80
Lys Glu Thr Val Cys Pro Arg Pro Thr Arg Gln Pro Pro Glu Leu Cys
   85                               90                               95
Asp Phe Lys Glu Asn Gly Arg Val Lys Gln Cys Val Gly Thr Val Thr
  100                               105                               110
Leu Asn Pro Ser Ile His Ser Leu Asp Ile Ser Cys Asn Glu Ile Gln
  115                               120                               125
Ser Val Arg Arg Arg Pro Arg Pro Pro Tyr Leu Pro Arg Pro Arg Pro
  130                               135                               140
Pro Pro Phe Phe Pro Pro Arg Leu Pro Pro Arg Ile Pro Pro Gly Phe
 145                               150                               155                               160
Pro Pro Arg Phe Pro Pro Arg Phe Pro Gly Lys Arg
   165                               170

```

<210> 13
 <211> 170
 <212> PRT
 <213> Homo sapiens

```

<400> 13
Met Lys Thr Gln Arg Asn Gly His Ser Leu Gly Arg Trp Ser Leu Val
  1                               5                               10                               15
Leu Leu Leu Leu Gly Leu Val Met Pro Leu Ala Ile Ile Ala Gln Val
   20                               25                               30
Leu Ser Tyr Lys Glu Ala Val Leu Arg Ala Ile Asp Gly Ile Asn Gln
  35                               40                               45
Arg Ser Ser Asp Ala Asn Leu Tyr Arg Leu Leu Asp Leu Asp Pro Arg
  50                               55                               60
Pro Thr Met Asp Gly Asp Pro Asp Thr Pro Lys Pro Val Ser Phe Thr
 65                               70                               75                               80
Val Lys Glu Thr Val Cys Pro Arg Thr Thr Gln Gln Ser Pro Glu Asp
   85                               90                               95
Cys Asp Phe Lys Lys Asp Gly Leu Val Lys Arg Cys Met Gly Thr Val
  100                               105                               110
Thr Leu Asn Gln Ala Arg Gly Ser Phe Asp Ile Ser Cys Asp Lys Asp
 115                               120                               125
Asn Lys Arg Phe Ala Leu Leu Gly Asp Phe Phe Arg Lys Ser Lys Glu
 130                               135                               140
Lys Ile Gly Lys Glu Phe Lys Arg Ile Val Gln Arg Ile Lys Asp Phe
 145                               150                               155                               160
Leu Arg Asn Leu Val Pro Arg Thr Glu Ser
   165                               170

```

<210> 14
 <211> 173
 <212> PRT
 <213> Mus musculus

```

<400> 14
Met Gln Phe Gln Arg Asp Val Pro Ser Leu Trp Leu Trp Arg Ser Leu
  1                               5                               10                               15
Ser Leu Leu Leu Leu Leu Gly Leu Gly Phe Ser Gln Thr Pro Ser Tyr

```

```

      20      25      30
Arg Asp Ala Val Leu Arg Ala Val Asp Asp Phe Asn Gln Gln Ser Leu
      35      40      45
Asp Thr Asn Leu Tyr Arg Leu Leu Asp Leu Asp Pro Glu Pro Gln Gly
      50      55      60
Asp Glu Asp Pro Asp Thr Pro Lys Ser Val Arg Phe Arg Val Lys Glu
65      70      75      80
Thr Val Cys Gly Lys Ala Glu Arg Gln Leu Pro Glu Gln Cys Ala Phe
      85      90      95
Lys Glu Gln Gly Val Val Lys Gln Cys Met Gly Ala Val Thr Leu Asn
      100      105      110
Pro Ala Ala Asp Ser Phe Asp Ile Ser Cys Asn Glu Pro Gly Ala Gln
      115      120      125
Pro Phe Arg Phe Lys Lys Ile Ser Arg Leu Ala Gly Leu Leu Arg Lys
      130      135      140
Gly Gly Glu Lys Ile Gly Glu Lys Leu Lys Lys Ile Gly Gln Lys Ile
145      150      155      160
Lys Asn Phe Phe Gln Lys Leu Val Pro Gln Pro Glu Gln
      165      170

```

<210> 15
 <211> 176
 <212> PRT
 <213> Capra hircus

```

<400> 15
Met Glu Thr Gln Gly Ala Ser Leu Ser Leu Gly Arg Trp Ser Leu Trp
1      5      10      15
Leu Leu Leu Leu Gly Leu Val Val Pro Leu Ala Ser Ala Gln Ala Leu
      20      25      30
Ser Tyr Arg Glu Ala Val Leu Arg Ala Val Gly Gln Leu Asn Glu Arg
      35      40      45
Ser Ser Glu Ala Asn Leu Tyr Arg Leu Leu Glu Leu Asp Pro Ala Pro
      50      55      60
Asn Asp Glu Val Asp Pro Gly Thr Arg Lys Pro Val Ser Phe Thr Val
65      70      75      80
Lys Glu Thr Val Cys Pro Arg Thr Thr Gln Gln Pro Pro Glu Glu Cys
      85      90      95
Asp Phe Lys Glu Asn Gly Leu Val Lys Gln Cys Val Gly Thr Val Thr
      100      105      110
Leu Asp Pro Ser Asn Asp Gln Phe Asp Ile Asn Cys Asn Glu Leu Gln
      115      120      125
Ser Val Arg Phe Arg Pro Pro Ile Arg Arg Pro Pro Ile Arg Pro Pro
      130      135      140
Phe Asn Pro Pro Phe Arg Pro Pro Val Arg Pro Pro Phe Arg Pro Pro
145      150      155      160
Phe Arg Pro Pro Phe Arg Pro Pro Ile Gly Pro Phe Pro Gly Arg Arg
      165      170      175

```

<210> 16
 <211> 129
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> consensus sequence

<400> 16

Met	Glu	Thr	Gln	Arg	Ser	Ser	Leu	Gly	Arg	Trp	Ser	Leu	Leu	Leu	Leu
1				5					10					15	
Leu	Gly	Leu	Val	Pro	Ala	Ile	Ala	Gln	Ala	Leu	Ser	Tyr	Arg	Glu	Ala
			20					25					30		
Val	Leu	Arg	Ala	Val	Asp	Asn	Gln	Arg	Ser	Ser	Glu	Ala	Asn	Leu	Tyr
	35						40					45			
Arg	Leu	Leu	Leu	Asp	Pro	Pro	Asp	Glu	Asp	Pro	Thr	Pro	Lys	Pro	Val
	50					55					60				
Ser	Phe	Thr	Val	Lys	Glu	Thr	Val	Cys	Pro	Arg	Thr	Thr	Gln	Gln	Pro
65					70					75					80
Pro	Glu	Cys	Asp	Phe	Lys	Glu	Asn	Gly	Leu	Val	Lys	Gln	Cys	Gly	Thr
				85				90						95	
Val	Thr	Leu	Asn	Pro	Ser	Phe	Asp	Ile	Ser	Cys	Asn	Glu	Pro	Gly	Gln
			100					105					110		
Val	Arg	Arg	Lys	Ile	Gly	Arg	Ile	Gln	Arg	Ile	Lys	Phe	Leu	Pro	Arg
		115					120					125			

Arg